

PROJECT DESCRIPTION

I. GENERAL

THIS PROJECT INVOLVES INSTALLATION OF AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTONS AND VIDEO DETECTION CAMERAS FOR SAMPLING DETECTION FOR NORTHBOUND AND SOUTHBOUND SHADY GROVE ROAD AND EASTBOUND MD 28 AT THE INTERSECTION OF MD 28 (W. MONTGOMERY AVENUE/ KEY WEST AVENUE) AND SHADY GROVE ROAD IN MONTGOMERY COUNTY.

MD 28 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

II. INTERSECTION OPERATION

THE INTERSECTION SHALL OPERATE IN A NEMA EIGHT(8) PHASE. SEMI-TRAFFIC-ACTUATED MODE. THE MD 28 APPROACHES SHALL OPERATE CONCURRENTLY WITH EXCLUSIVE/ PERMISSIVE LEFT-TURN PHASES FOR THE EASTBOUND AND WESTBOUND APPROACHES. THE SHADY GROVE ROAD APPROACHES SHALL OPERATE CONCURRENTLY WITH AN EXCLUSIVE LEFT-TURN MOVEMENT IN BOTH NORTH AND SOUTH DIRECTION. EXISTING PEDESTRIAN MOVEMENTS SHALL BE UPGRADED TO AUDIBLE PEDESTRIAN PUSHBUTTON OPERATIONS ON THE ALL LEGS OF THE INTERSECTION.

THE AUDIBLE PUSHBUTTONS WILL FUNCTION AS FOLLOWS:

1. WHEN A PEDESTRIAN LOCATES AND PRESSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT MESSAGE WILL ANNOUNCE THE FOLLOWING MESSAGE:

SOUTH LEG (BUTTON 24p): "Wait to cross Shady Grove at Key West, Wait."
SOUTH LEG (BUTTON 25p): "Wait to cross Shady Grove at West Montgomery, Wait."
NORTH LEG (BUTTON 26p): "Wait to cross Shady Grove at West Montgomery, Wait."
NORTH LEG (BUTTON 27p): "Wait to cross Shady Grove at Key West, Wait."
WEST LEG (BUTTONS 28p, 29p): "Wait to cross Key West at Shady Grove, Wait."
EAST LEG (BUTTONS 30p, 31p): "Wait to cross West Montgomery at Shady Grove, Wait."

2. WHEN THE "WALK" PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK, WHICH WILL LAST FOR THE DURATION OF THE "WALK" PHASE.

III. SPECIAL NOTES

1. MONTGOMERY COUNTY SHALL PERFORM THE INTERNAL WIRING OF THE CONTROLLER/CABINET. THE CONTRACTOR SHALL PURCHASE AND DELIVER THE AUDIBLE/TACTILE PUSHBUTTONS TO THE MONTGOMERY COUNTY TECH CENTER FOR INSTALLATION AND PROGRAMMING. THE CONTRACTOR SHALL CONTACT MS. EILEEN NORMAND AT 310-279-1291, AT LEAST THREE (3) DAYS PRIOR TO THE DELIVERY.
2. MAINTENANCE OF TRAFFIC WILL BE PERFORMED BY THE CONTRACTOR UTILIZING THE STANDARD PLATES FOR TRAFFIC CONTROL FROM SECTION MD 104.00 OF THE SHA BOOK OF STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES.
3. THE CONTRACTOR SHALL MAINTAIN PEDESTRIAN ACCESS AT ALL TIMES.

PROJECT CONTACTS

1. THE FOLLOWING ARE THE CONTACT PERSONS FOR THE PROJECT:

MS. ANYESHA MOOKHERJEE, ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (301) 513-7498

MR. DUANE BERNARD, ASSISTANT DISTRICT ENGINEER - CONSTRUCTION
PHONE: (301) 513-7385

MR. TOM FOUNTAIN, ASSISTANT DISTRICT ENGINEER - MAINTENANCE
PHONE: (301) 513-7304

MR. VICTOR GRAFTON, UTILITY ENGINEER
PHONE: (301) 513-7350

MS. CORREN JOHNSON, DIVISION CHIEF - TRAFFIC OPERATIONS, OOTS
PHONE: (410) 787-7630

MR. EDWARD RODENHIZER, CHIEF - SIGNAL SHOP
PHONE: (410) 787-7652

MR. EUGENE BAILEY, CHIEF - SIGN SHOP
PHONE: (410) 787-7676

EQUIPMENT LIST 'A'

A. EQUIPMENT TO BE SUPPLIED BY SHA AND INSTALLED BY THE CONTRACTOR.

CATEGORY CODE	QUANTITY	DESCRIPTION
973023	24 SF	FLAT SHEET ALUMINUM SIGNS CONSISTING OF: MAST ARM/POLE-MOUNTED: 4 EA R10-3(1) COUNTDOWN PEDESTRIAN PUSHBUTTON SIGN "TO CROSS SHADY GROVE RD" (9" X 15") POLE MOUNT 2 EA R10-3(1) COUNTDOWN PEDESTRIAN PUSHBUTTON SIGN "TO CROSS KEY WEST AVE." (9" X 15") POLE MOUNT 2 EA R10-3(1) COUNTDOWN PEDESTRIAN PUSHBUTTON SIGN "TO CROSS W. MONTGOMERY AVE." (9" X 15") POLE MOUNT GROUND-MOUNTED: 1 EA W11-2(R) (30" X 30") GROUND MOUNTED 1 EA W11-2(L) (30" X 30") GROUND MOUNTED 1 EA W16-7pR (24" X 12") GROUND MOUNTED 1 EA W16-2pL (24" X 12") GROUND MOUNTED

EQUIPMENT LIST 'B'

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

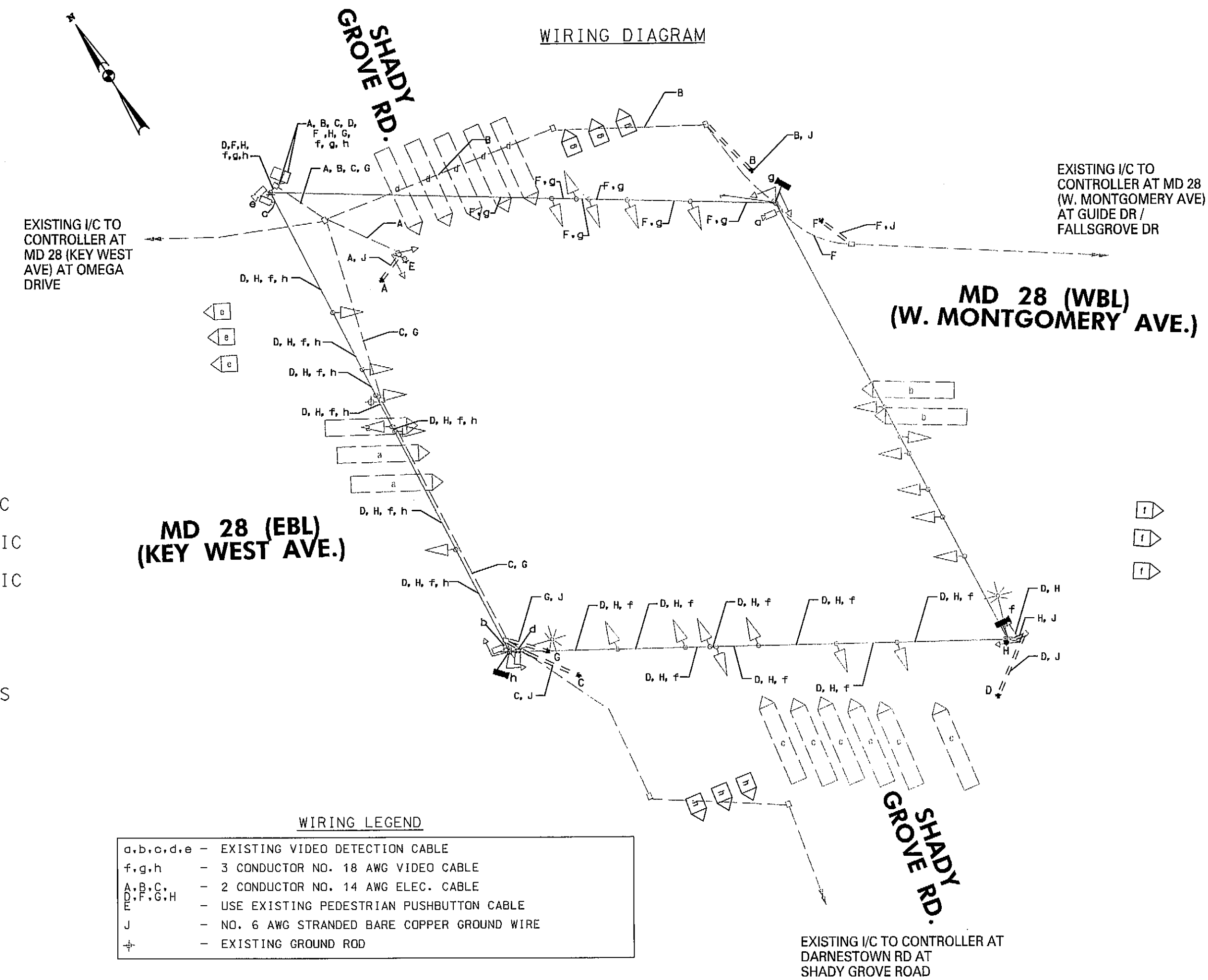
CATEGORY CODE	QUANTITY	DESCRIPTION
120500	1 LS	MAINTENANCE OF TRAFFIC
203030	1 CY	TEST PIT EXCAVATION
585405	540 LF	5" HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
585412	1070 LF	12" HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
585424	370 LF	24" HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
655105	380 SF	5" CONCRETE SIDEWALK
655120	34 SF	DETECTABLE WARNING SURFACE FOR CURB RAMPS
800000	8 EA	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS
800000	1 EA	REMOVE AND DISPOSE OF EQUIPMENT
800000	3 EA	VIDEO DETECTION CAMERA AND CABLE, ANY LENGTH
801004	3 CY	CONCRETE FOR SIGNAL FOUNDATION
801104	34 LF	WOOD SIGN SUPPORTS 4" X 4"
802145	1 EA	ADJUST EXISTING HANDHOLE
802501	140 LF	NO. 6 AWG STRANDED BARE COPPER GROUND
805125	100 LF	2" SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
813014	16.5 SF	INSTALL GROUND MOUNTED SIGN
813015	7.5 SF	INSTALL OVERHEAD SIGN
818004	7 EA	BREAKAWAY PEDESTAL POLE (ANY SIZE)
861105	2330 LF	ELECTRICAL CABLE, 2-CONDUCTOR (NO. 14 AWG)

EQUIPMENT LIST 'C'

C. ALL MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24,25	26,27	28-31		
PHASE 1+5	+G	R	+G	+G	+G	R	R	+G	+G	+G	R	R	R	R	+R	+R	+R	+R	R	R	+R	+R	R	R	DW	DW	DW	
	1+5 CHANGE TO PHASE 1 & 6 OR PHASE 2 & 5 OR PHASE 2 & 6																											
PHASE 1+6	+G	G	+G	+G	G	G	G	+R	+R	+R	R	R	R	R	R	R	R	R	R	R	+R	+R	+R	R	R	DW	WK	DW
1 CHANGE	+Y	G	+Y	+Y	+Y	G	G	+R	+R	+R	R	R	R	R	R	R	R	R	R	R	+R	+R	+R	R	R	DW	WK	DW
PHASE 2+5	+R	R	+R	+R	+R	R	R	+G	+G	+G	G	G	G	R	+R	+R	R	R	R	R	+R	+R	+R	R	R	WK	DW	DW
5 CHANGE	+R	R	+R	+R	+R	R	R	+Y	+Y	+Y	G	G	R	R	+R	+R	R	R	R	R	+R	+R	+R	R	R	WK	DW	DW
PHASE 2+6	+R	G	+R	+R	+R	G	G	+R	+R	+R	G	G	G	R	+R	+R	R	R	R	R	+R	+R	+R	R	R	WK	WK	DW
PED CLEAR	+R	G	+R	+R	+R	G	G	+R	+R	+R	G	G	G	R	+R	+R	R	R	R	R	+R	+R	+R	R	R	FL/DW	FL/DW	DW
2+6 CHANGE	+R	Y	+R	+R	+R	Y	Y	+R	+R	+R	Y	Y	R	+R	+R	R	R	R	R	R	+R	+R	+R	R	R	DW	DW	DW
PHASE 3+7	+R	R	+R	+R	+R	R	R	+R	+R	+R	R	R	R	R	+G	+G	R	R	R	R	+G	+G	+G	R	R	DW	DW	DW
	3 & 7 CHANGE TO PHASE 3 & 8 OR PHASE 4 & 7 OR PHASE 4 & 8																											
PHASE 3 & 8	+R	R	+R	+R	+R	R	R	+R	+R	+R	R	R	R	+Y	G	+Y	G	G	G	+R	+R	+R	R	R	DW	DW	DW	
3 CHANGE	+R	R	+R	+R	+R	R	R	+R	+R	+R	R	R	R	+Y	G	+Y	G	G	G	+R	+R	+R	R	R	DW	DW	DW	
PHASE 4 & 7	+R	R	+R	+R	+R	R	R	+R	+R	+R	R	R	R	R	R	R	R	R	R	R	+G	+G	+G	G	G	DW	DW	DW
7 CHANGE	+R	R	+R	+R	+R	R	R	+R	+R	+R	R	R	R	G	+R	R	R	R	R	R	+Y	+Y	+Y	G	G	DW	DW	DW
PHASE 4 & 8	+R	R	+R	+R	+R	R	R	+R	+R	+R	R	R	R	G	+R	G	G	R	R	R	+R	+R	+R	G	G	DW	DW	DW
4 & 8 CHANGE	+R	R	+R	+R	+R	R	R	+R	+R	+R	R	R	R	Y	+R	Y	Y	G	R	R	+R	+R	+R	Y	Y	DW	DW	DW
PHASE ALT 4 & ALT 8	+R	R	+R	+R	+R	R	R	+R	+R	+R	R	R	R	G	+R	G	G	G	R	R	+R	+R	+R	G	G	DW	DW	WK
PED CLEARANCE	+R	R	+R	+R	+R	R	R	+R	+R	+R	R	R	R	G	+R	G	G	G	R	R	+R	+R	+R	G	G	DW	DW	FL/DW
ALT 4 & ALT 8 CHANGE	+R	R	+R	+R	+R	R	R	+R	+R	+R	R	R	R	Y	+R	Y	Y	G	R	R	+R	+R	+R	Y	Y	DW	DW	DW
FLASHING OPERATION	+FL/R	FL/R	+FL/Y	+FL/R	FL/Y	FL/Y	+FL/R	+FL/R	FL/Y	FL/Y	+FL/R	FL/R	+FL/R	FL/R	+FL/R	FL/R	+FL/R	FL/R	+FL/R	FL/R	+FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	



ADDENDUM NO. 2

DATE: 04 - - 13

CENTURY

ENGINEERING
CONSULTING ENGINEERS - PLANNERS
10710 GILROY ROAD
HUNT VALLEY, MD 21031
PHONE: (443) 589-2400
FAX: (443) 589-2401

REVISION 'K'

CEI PROJECT NO. 27257-49



STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION
MD 28 (W. MONTGOMERY AVE./KEY WEST AVE.)
AT SHADY GROVE ROAD
ROCKVILLE, MARYLAND

GENERAL INFORMATION SHEET

SCALE NONE ADVERTISED DATE APR 19, 2013 CONTRACT NO. MO1315177

DESIGNED BY LL/ENB COUNTY MONTGOMERY

DRAWN BY BL/ENB LOGMILE 15028019.30

CHECKED BY NMR TMS NO. L510

F.A.P. NO. AC-NHPP-G-5010(15)E TOD NO.

TS NO. 1189K DRAWING SG-02 OF 02 SHEET NO. 2 OF 2